INFINITE PERIPHERALS
PROVIDER OF CUSTOM RECEIPT PRINTING SOLUTIONS

PP-55

BlackBerry User's Manual

Contents

Contents 2
Technical Data 3
Box Contents 4
Software (Drivers & SDK): 4
Getting Started 5
About Your PP-55 6
Charging Battery 7
Printer Status & Operating Modes 8
Loading Paper 9
Running Self-test 10
Compatible Devices 11
Compatible products: 11
Magnetic Card Reader (MS Version only) 13
Barcode Reader (MS BC Version only) 14
Syncing Using PP55 15
Replacing PP55 Battery 16
Using Logos 17
Developing Solution 18
Troubleshooting 19
Contact Information 20

Technical Data

Feature	Specifications
Printing method	Line thermal dot printing
Printing speed	50 mm per second
Dot density	8 dot/mm, 203 dpi – Horizontal and Vertical
Resident fonts	A – 12 x 24 B – 9 x 16
Loadable fonts	C – 12 x 24 D – 9 x 16
Printing columns	Font A, C – 32 columns Font B, D – 42 columns
Logo Registration	1 Black & White BMP format (1-bit per pixel) Size: 384 x 240
Memory	RAM 1Mbit
Resident Barcodes	EAN13, EAN8, UPCA, UPCE, Code39, Code93, Code 128, Interleave 2 of 5, Codebar, PDF417
Communications	Serial RS232, Optional 2 x USB Master/Slave
Magnetic Card Reader	3 track head, ISO7811
1D Barcode Reader	Symbol Linear Image Scanner
Power supply	Rechargeable Lithium Ion battery, 7.4V @ 2000 mAh Battery capacity: ~ 4 Rolls (Alpha-numeric data) AC adapter – 9V @ 1000 mA
Environment	Operating temp. -10°C to 45°C @ 10 to 90 % RH Storage temp. -25°C to 70°C @ 10 to 90 % RH
Reliability	50 Million pulses 50 km
Dimensions	L – 195 mm, H – 50 mm, W – 87 mm Weight – 390 grams including battery and paper roll
Thermal paper	Roll 57.5 ± 0.5 mm wide 40 mm Ø (~ 80 feet) Thickness 0.06 ~ 0.10 mm

Table 1

Box Contents

Your IPC PP-55 comes with the following items listed below:

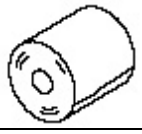
Item	Part Number	Descriptions	Image
1	PP55XX-XX	PP55 Thermal Printer	
2	P50-DAT02-55	LiIon Battery for PP55	
3	P50-DAT03-55	Power Adapter 115 Volt for PP55	
4	P50-DAT06-55	Interface cable (Hot Sync) for PP55	
5	P5802	(1) Roll Thermal Media	

Table 2

Software (Drivers & SDK):

Because of the continually evolving Driver & SDK to support new BlackBerry devices, Drivers & SDK are distributed online and is available for download at our website indicated below. For details on using the PP55 BlackBerry Drivers & SDK, please refer to the SDK's documentation.

For the latest PP-55 SDK's, visit our developer web site at:

http://www.ipcprint.com/support/default.asp

Getting Started

The IPC PP-55 allows you to print information from your BlackBerry Smartphone. Before using the printer the battery should be properly charged and thermal media installed. The following Quick Start guide will help to get your PP55 ready for use.

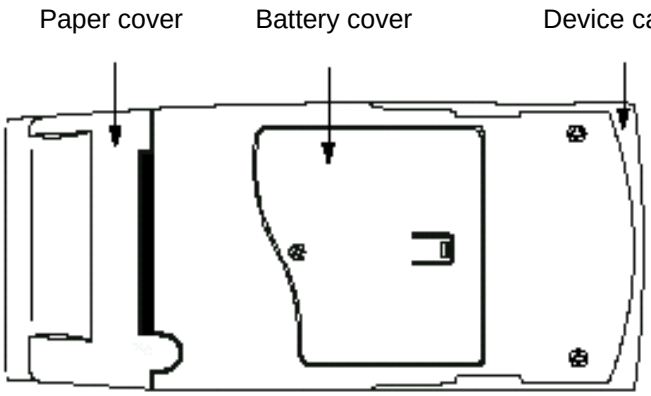
Quick Start:

Steps	What to do	Purpose	Where to find more information
1	Charge the PP-55 rechargeable battery pack as recommended in this manual.	The Lithium Ion battery pack should be fully charged before use to ensure long battery life.	Charging Battery, Page 5
2	Load PP-55 print media (Thermal Paper)	PP-55 requires Thermal paper for printing.	Loading Paper, Page 7
3	Install Print Software	To print from your BlackBerry device, software needs to be installed on to your device.	Printing software is not provided by IPC. Please contact your PP55 reseller or Infinite Peripherals for recommendations on Third-Party solutions. Developers should refer to the section in this manual on "Developing Solutions".

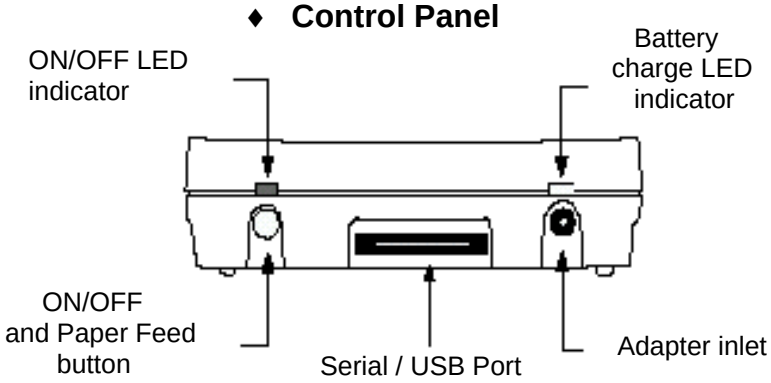
Table 3

About Your PP-55

♦ **PP-55 Overall View**



♦ **Control Panel**



♦ **Battery recharge**

NOTE: *With a fully charged battery, PP-55 can print out more than 5000 inches of (alpha numeric) data.*

Prolonged periods of storage can cause a drop in the power of the printer's rechargeable battery!

To recharge the battery, plug AC/DC adapter supplied with printer and charge until the red battery charge indicator turns to green.

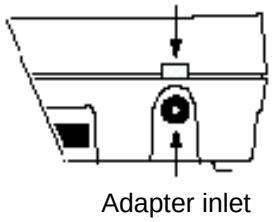


Figure 1

Charging Battery

Charging PP-55:

The PP-55 uses a Lithium Ion rechargeable battery pack. Before first use, the PP-55 battery pack should be charged for at least 4 hours.

To prevent electrical damage to the printer and/or battery pack, please use approved AC/DC adapter only.

Figure 2

Charging PP-55 & BlackBerry:

The PP-55 has a built-in charging circuit to enable the charging of (selected models) of BlackBerry device while in the PP-55's cradle. PDA charging only occurs when the external AC/DC adaptor is connected to PP-55 adapter inlet.

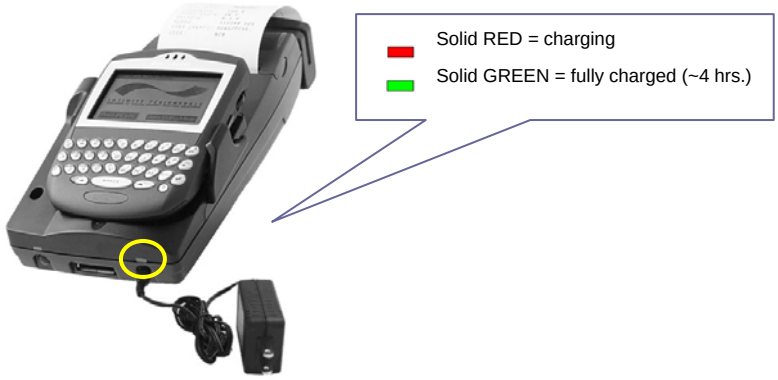
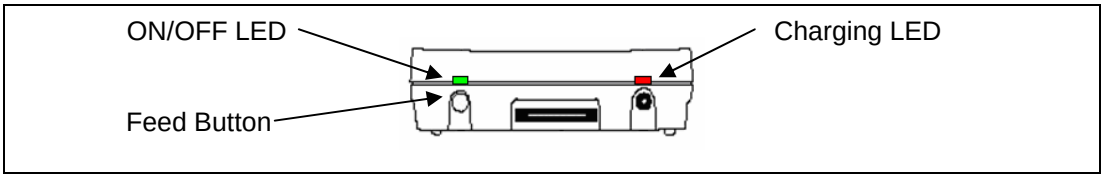


Figure 3

Printer Status & Operating Modes

The PP-55 uses LEDs to indicate various conditions of operation. This may be charging, printing, out of paper or error conditions. The following explains these conditions and LED indication.



Printer Status		
Battery Charging LED		Solid GREEN = Battery at full charge
		Solid RED = Battery charging
ON/OFF LED		Solid GREEN = Power ON
		Solid RED = Low battery
		Slow Blinking = High temperature error
		Fast Blinking = Printer out of paper

Table 4

The PP-55's paper feed switch/button is used for entering various printer modes. These modes can be used to assist developers in debugging problems related to programming and communication. The following explain how to access the various operating modes.

Operation Modes		
Short Push	**N/A**	Paper feed
Push and Hold - release after the number of beeps	**1 - beep**	Self-test
	2 - beeps	Hex dump
	3 - beeps	Reserved – For factory use only
	4 - beeps	Reserved – For factory use only
	5 - beeps	Reserved – For factory use only

Table 5

Note: Care must be taken when entering operating modes to prevent the clearing of factory preset configuration information.

Loading Paper

The PP-55 uses a drop-and-load design making paper loading easy and trouble free. To load paper, simply remove the paper cover and drop in the new roll as shown in the steps below.

Make sure that the paper is placed in the printer as shown in step 2 below.

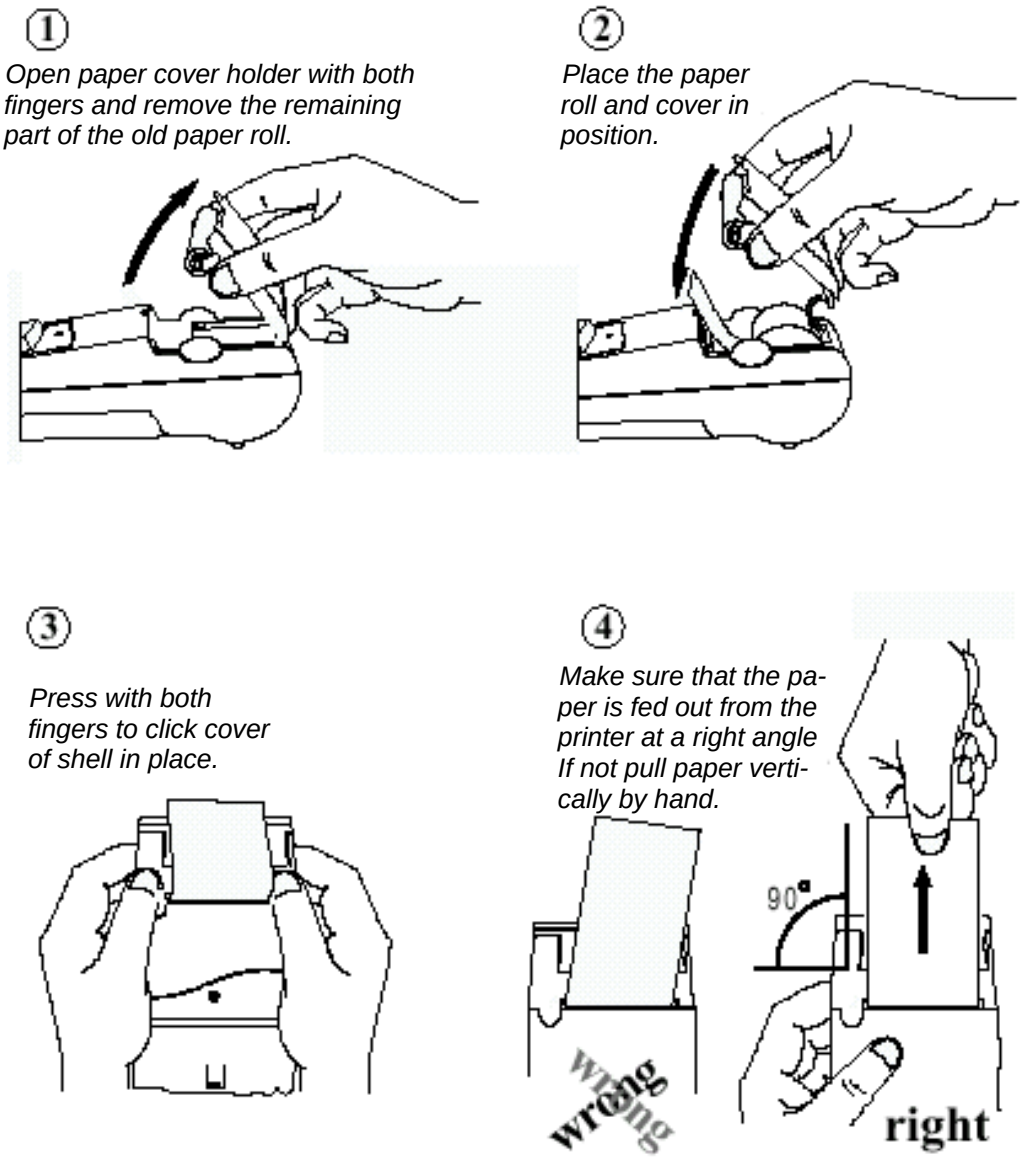

1
Open paper cover holder with both fingers and remove the remaining part of the old paper roll.
2
Place the paper roll and cover in position.
3
Press with both fingers to click cover of shell in place.
4
Make sure that the paper is fed out from the printer at a right angle If not pull paper vertically by hand.
90°
wrong
wrong
right

Figure 4

Running Self-test

The PP-55 has a built-in test pattern that shows the printer's current configuration as well as the various resident printer fonts. The self-test can also be used as a troubleshooting tool to determine printing problems or battery level. The steps below show how the self-test is activated.

Step #1: Make sure the On-line **LED** is **OFF**. Before performing step #2.

Figure 5

Step #2: Press and hold the paper feed button in for one beep. Release the feed button after the first beep. The printer should start printing the internal test pattern

- Resident font sizes
- Number of characters per line
- Text formatting
- Resident character set
- Resident barcode symbols
- Printer's Configuration

IPC Palm Printer
Model PP-55MS Ver. 1.01b
Two internal fonts: 9x16 & 12x24
Two loadable fonts: 9x16 & 12x24
From this font can be printed up
to 32 symbols/line
From this font can be printed up
to 42 symbols/line
Normal Bold Underline Italic
Different sizes chars
Supported bar codes:
EAN13, EAN8, UPCA, UPCE, Code39
Code93, 2 of 5 interleaved
Codabar, Code128
1 2 3 4 5 6 7 8 9 0 1 2 8
Downloadable graphics
Intensity: 100 %
Temperature: 22 C
Battery: 8.1 V
Speed: 115200 bps

Figure 6

Compatible Devices

The PP-55 / PP-55MS portable thermal printer is designed specifically for use with most BlackBerry USB devices.

The PP-55 can be used in a variety of applications where hardcopy printouts are required.

End Users – for printing Emails, HTML pages, Graphics files, Clipboard data, text only files, Screen Captures, and more.

Manufacturers – for shipping & receiving goods, date and time printing, inventory control and W.I.P. management.

Distributors – for marking prices, sales receipts, route deliveries.

POS – for mobile sales receipts and credit card verifications in POS application.

The following is a list of devices that the PP-55 currently supports.

Compatible products:

No.	RIM Device	Operation System (OS)
1	RIM 71xx, 7130e	BlackBerry
2	RIM 7230, 7250, 7280, 7290	BlackBerry
3	RIM 7510, 7520	BlackBerry
4	RIM 7730, 7780	BlackBerry

Table 6

Devices are added continually. Visit our web site at :

http://www.ipcprint.com/products/mobility/complist_thermpp55-50.asp

Attaching Device

The PP-55 has several versions designed to be used with specific BlackBerry devices. Care must be taken to ensure that the PP-55 cradle connector and PDA connector are not accidentally damaged. The figures below show how to attach the different device to the PP55 printer and how to remove the device from the printer.

Soft Cradled (Cabled) version:

Figure 7

Hard Cradled version:

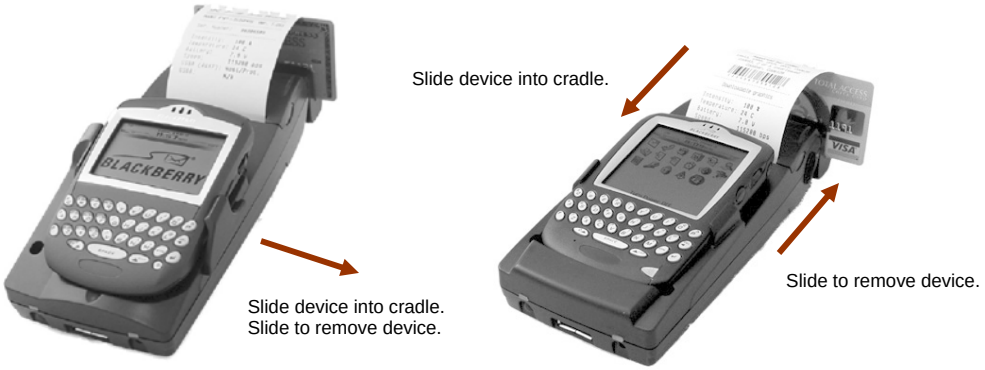


Figure 8

No.	RIM Device	Hard Cradle	Soft Cradle
1	RIM 71xx, 7130e		X
2	RIM 7230, 7250, 7280, 7290	X	X
3	RIM 7510, 7520	X	X
4	RIM 7730, 7780	X	X

Table 7

Magnetic Card Reader (MS Version only)

The PP-55MS has a built-in magnetic card reader. The card reader incorporates a (3)-track magnetic read head requiring a single swipe to read field data from all three tracks.

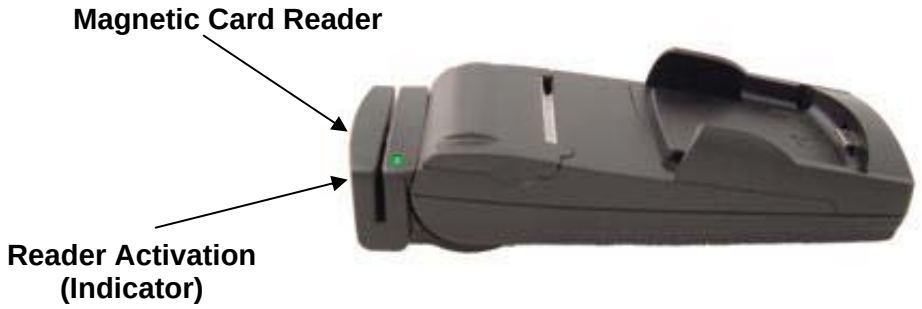


Figure 9

The magnetic read head faces towards the PDA cradle. When placing the card into the reader, the magnetic strip must be facing away from the PDA's cradle as show in the figure below. Keep the edge of the card flat on the inner base of the reader to ensure that the magnetic strip passes over the read head evenly.

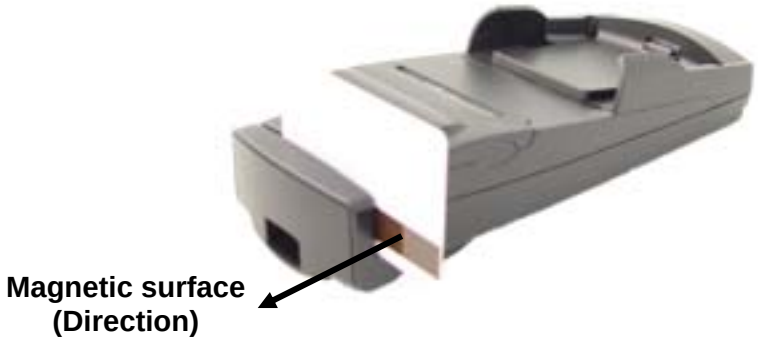


Figure 10

User Notes:

To use the magnetic card reader feature, special software must be used to read and process the information. Please consult your reseller if this software is available or contact Infinite Peripherals for recommendations on compatible third party software solutions.

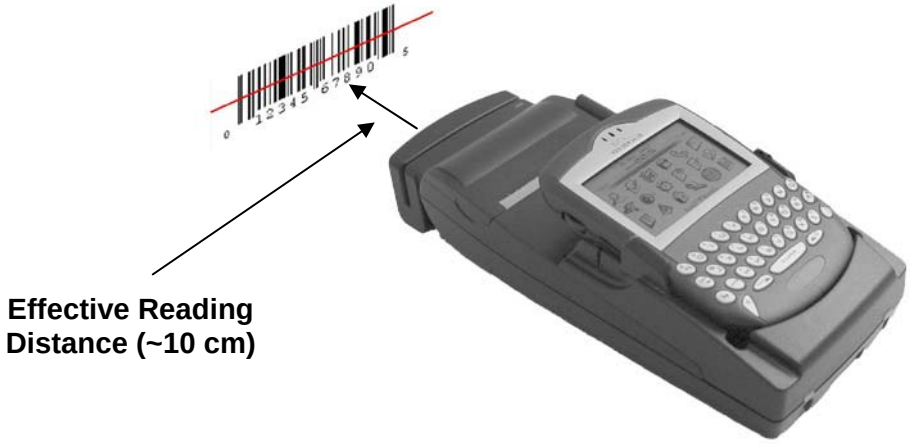
Barcode Reader (MS BC Version only)

The PP-55MS BC offers a version with built-in barcode reader. The barcode reader incorporates a linear image scan head and is capable of reading 1D barcodes.

Barcode Reader

Figure 11

The effective reading distance of the PP-55 barcode reader is approximately 10 cm. To scan a barcode, position the read head as close to the barcode label as possible. Activate the scanner then slowly pull back the unit increasing the distance between the barcode and read head until the barcode has been read by the scanner.



Effective Reading Distance (~10 cm)

Figure 12

User Notes:

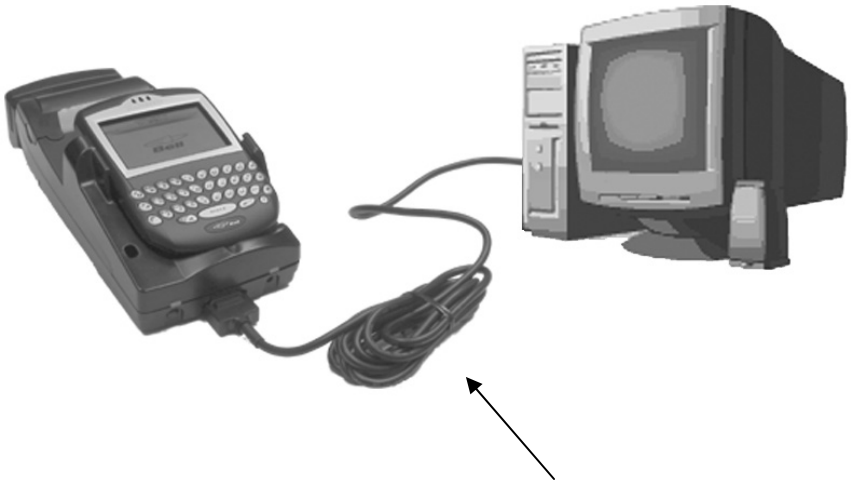
To use the barcode reader feature, special software must be used to read and process the information. Please consult your reseller if this software is available or contact Infinite Peripherals for recommendations on compatible third party software solutions.

Syncing Using PP55

The PP-55 is designed to work as cradle for syncing your BlackBerry device to your desktop PC through the standard PC USB port.

To sync your BlackBerry to the PC, using the USB sync cable that is supplied with the PP5 connect one end of the cable to the PP55 and the other to any standard USB port as shown in the figure below.

Run the BlackBerry Desktop Manager “supplied with BlackBerry device” to start the syncing process.



Interface cable (Hot Sync) for PP55 (P50-DAT06-55)

Figure 13

Replacing PP55 Battery

To replace the battery in the PP55 printer follow the steps below.

Hard Cradled version:

1. Remove the device from the cradle.
2. Using a Philips screw driver remove the (2) cradle screws at point (A). Note: do not detach the flex cable that connects the cradle to the base unit.
3. Using a Philips screw driver remove the battery cover screw at point (B).

Soft Cradled (Cabled) version:

1. Detach the device from the PP55 interface cable.
2. Using a Philips screw driver remove the battery cover screw at point (B).

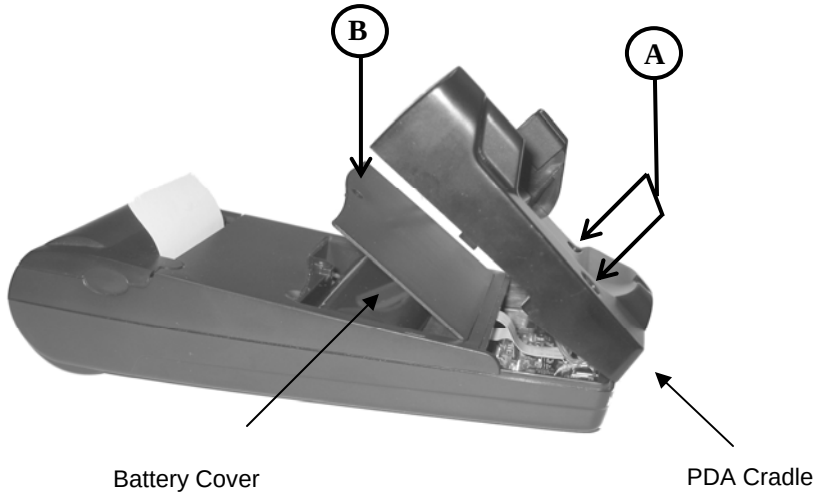


Figure 14

Using Logos

The PP55 thermal printer lets you add a stored logo to the Top or Bottom of your printed receipts.

Note:

In order to use a logo on printed receipts, the logo must first be loaded into the PP55 flash memory.

Logo Manager (PC Utility):

For help with creating and testing logos for the PP55, use Logo Manager. Logo Manager is available for download at:

http://www.ipcprint.com/support/default.asp

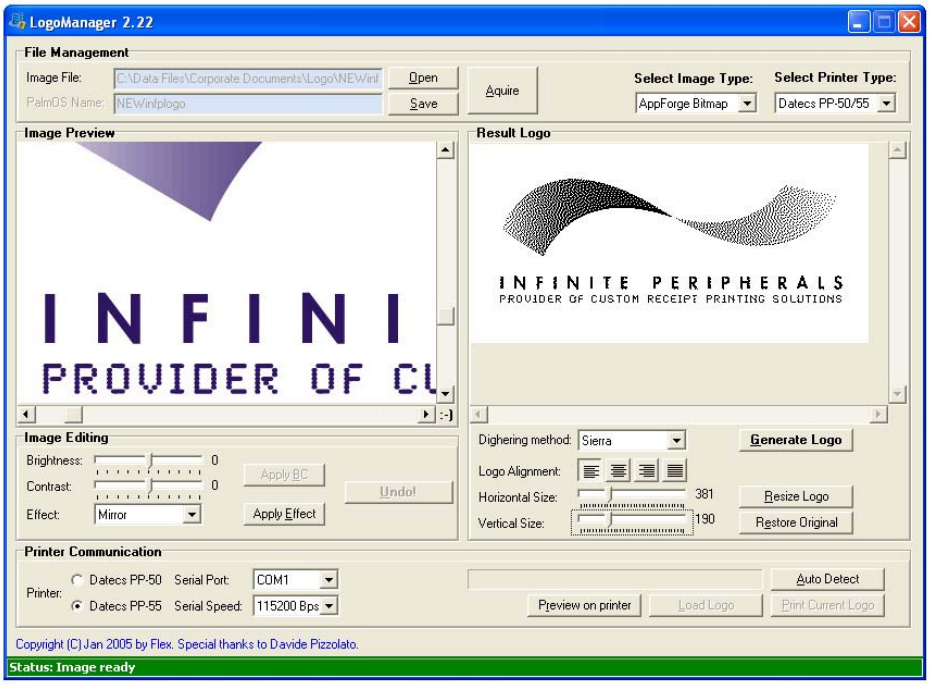


Figure 15

Note: Testing logos using Logo Manager requires the use of a special PP55 serial cable. The PC serial cable #**P50-DAT07-55** can be purchase from Infinite Peripherals.

Developing Solution

Integrating the PP-55 into your BlackBerry solution requires the use of the BlackBerry OS SDK for PP-55. The SDK incorporates API specific to developing application using the integrated Card reader and Barcode reader as well as incorporating Graphics, Barcode and Text printing capability of the PP-55.

The table below shows the SDKs currently available for BlackBerry devices.

SDKs	Language	IDE
BlackBerry Java	Java	RIM BlackBerry Java JDE 4.0 and higher

Table 8

For details on using the PP55 BlackBerry SDK, please refer to the SDK's documentation.

For the latest PP-55 SDK's, visit our developer web site at:

http://www.ipcprint.com/support/default.asp

Troubleshooting

If you're having a printing problem refer to the table below for possible causes.

Item	Problem	Possible Cause
1	Paper feeds after issuing a print job but no printed text visible on paper.	Thermal media is specially coated on outside of roll. Remove paper roll and reload properly. See section "Loading Paper" for details on loading paper.
		Paper cover not installed properly. See section "Loading Paper" for details on replacing paper cover.
2	On-line LED blinks fast continuously.	Printer out of paper.
		Paper not properly loaded. See section "Loading Paper" for details on loading paper.
3	Text and/or graphics are printed very light.	Battery voltage low. See section on charging battery pack.
		Thermal media not imaging correctly. Verify that you are using the recommended thermal media.
4	Strange characters are printed when printing.	Battery voltage low. See section on charging battery pack.
5	On-line LED always solid RED	Battery voltage low. See section on charging battery pack.
6	Printer stops responding to print and paper feed commands.	Remove battery for 5 seconds and reconnect battery.
7	Printing is light or missing only on half of the print width.	Paper cover not properly installed. See section on loading paper. Mechanism jarred loose. Contact technical support.

Table 9

Contact Information

National Sales Headquarters:

Infinite Peripherals, Inc.
1340 Reynolds Avenue
Suite 101
Irvine, CA 92614
Toll Free: 866-278-7860
Phone: 949-222-0300
Fax: 949-222-0375
www.ipcprint.com
MobileSales@ipcprint.com

Midwest Sales Office:

Infinite Peripherals, Inc.
3104 N. Arlington Heights Road
Arlington Heights, IL 60004
Phone: 847-818-1260
Fax: 847-818-1287
www.ipcprint.com
MobileSales@ipcprint.com

East Coast Sales Office

Infinite Peripherals, Inc.
700-76 Broadway, #136
Westwood, NJ 07675
Phone: 201-647-3025
Fax: 866-247-1935
www.ipcprint.com
MobileSales@ipcprint.com

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MobileSupport@ipcprint.com